DETERMINING WHAT TO TEACH

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Index: Analysis/ Experts/ Duties/ Tasks/ Skills/ Behaviors

Abstract: Managers and supervisors in all work and educational settings need accurate job information to support data-based decision making. The DACUM (Develop A Curriculum) job/occupational analysis process has been used to conduct over 500 workshops for various educational agencies, businesses and industries, and state and federal agencies. It is a very effective, quick and low-cost process for precisely identifying the duties and tasks performed by expert workers. Most trainees are from community college, companies, and government agencies around the United States and more than 25 other countries.

Given an accurate and detailed description of what experts do, a school, college, company or government agency has a solid basis for training others to do the same. One writer described DACUM as a process for “cloning your best workers.” In addition to training and curriculum development, the process provides excellent data for management decision-making, career planning, needs assessment, test development, job redesign, performance evaluations, and quality control planning.

INTRODUCTION

How do you determine what will be taught in your education and/or training programs? Is there a big gap between what is offered learners in the classroom/lab and what is going on in the real world of work? Many have estimated the learning gap to be 50% or higher in some programs. Regardless of your setting—school, college, business, industry, or government agency—determining what skills, knowledge, and worker behaviors will be taught is very serious business.

Without an accurate determination of content, two major critical and costly errors are likely to occur. Known as the “Curriculum What Errors” they include failing to teach what should be taught (the latest skills and techniques) and teaching what should not be taught (outdated skills and information). (Norton, 1997).

As one can imagine, both errors negatively and seriously affect the student or worker’s job preparation. This type of learning gap or inadequacy can jeopardize the individual’s employment, affect the company’s success, and even reduce the economic well-being of the community.

Fortunately, there is an effective, quick, and low cost process available for significantly reducing the “curriculum what errors” and avoid “cheating the learner.” It is called DACUM (Developing A Curriculum).

Quality Instruction for the High Performance Workplace: DACUM

DACUM is an acronym for Developing A Curriculum (Adams, 1975). DACUM as used widely today is a unique, innovative, and very effective method of job, and/or occupational analysis. It is also very effective for conducting system and process analyses. The DACUM analysis workshop involves a trained DACUM facilitator and a committee of 5-12 expert workers from the
position, occupation, or other area of analysis. The profile chart that results from the usual two-day workshop is a detailed and graphic portrayal of the duties and tasks performed by the workers involved.

In addition to the development of precise duty and task statements, lists of the general knowledge and skills, worker behaviors, tools/equipment/materials/supplies, and future job trends/concerns are also identified.

DACUM is based on three logical premises (Norton, 1997):

1. **Expert workers can describe and define their job/occupation more accurately than anyone else.** Persons who are working full-time in their positions are the real experts on that job. Even though supervisors and managers usually know a lot about their subordinates work, they usually lack the expertise needed for a high quality analysis.

2. **An effective way to define a job/occupation is to precisely describe the tasks that expert workers perform.** A successful worker performs a variety of tasks that either the customer or employer wants performed. Possessing positive attitudes and knowledge alone are not enough. Hence, finding out what the expert workers (top performers) do will give us the opportunity to prepare other experts.

3. **All tasks, in order to be performed correctly demand the use of certain knowledge, skills, tools, and positive worker behaviors.** While the knowledge, skills, tools, and worker behaviors are not tasks, they are enablers which make it possible for the worker to be successful. Because these four enablers are so important, considerable attention is given during the DACUM workshop to identifying lists of each. Because these attributes are different and distinct from the tasks, it is very important to keep them separate if a high quality analysis of job performance requirements is to be obtained.

DACUM has been used very effectively to analyze occupations at the **professional, managerial, technical, skilled, and semi-skilled** levels. It has also been used effectively to conceptualize future jobs, and to analyze portions (selected duties) of one's occupation. Recently, with the increasing emphasis on quality brought forth by the TQM (Total Quality Management), ISO 9000, and QS 9000 movements, DACUM also has been used widely as a basis or foundation for analyzing various industrial systems and processes.

There are many reasons for using the DACUM process. The success of any company or organization is always affected by the quality of its employees. To produce and maintain a highly skilled workforce, schools, colleges, and companies must offer the highest quality of education and training possible to prepare present and future employees for the challenges they face.
Accurate and specific job information is essential to good decision-making in all areas of human resource development and management. All of the approaches to quality improvement and management--TQM, ISO 9000, QS 9000, etc. require participating companies to secure and utilize precise and detailed information about their workers roles and responsibilities--work processes, systems, duties, and tasks. **Job/occupational analysis** is the best method available for collecting that type of information. And DACUM is the best means of conducting job/occupational analysis that is available.

Why is DACUM the best method? The excellent quality of the **product** obtained (results) and the superior process used (committee of 5-12 expert workers interacting) are but two of the many important advantages.

The DACUM methodology is widely used in the United States, Canada, and many other countries simply because it is:

- Highly effective
- Quick
- Low cost

The powerful combination of being very effective, quick, and low cost has made the DACUM process very attractive to many schools, colleges, companies, and government agencies. Another important reason for using DACUM has been and continues to be the strong desire of many trainers and educators to establish a relevant, up-to-date, and localized research base for curriculum and instructional development. Clearly, for **educators** a curriculum base that is soundly determined with maximum input from the businesses who are going to employ the students is needed. For **business trainers** and developers, a curriculum base is needed that is specific to the companies needs and that has been developed in such a way as to obtain strong employee buy-in.

To permit any company or educational agency to identify its own localized research base for curriculum development, an alternative to traditional, time-consuming, and costly approaches to job/occupational analysis was needed. DACUM has become that powerful alternative!

Once employers understand what is to be done via DACUM and how the results will be used, it is a rare employer who will refuse to cooperate. Instead, many colleges who have used DACUM report such reactions as the following:

- Offers of equipment (loans and gifts) and supplies
- Offers to host field trips
- Willingness to provide subject matter experts
- Offers of supportive training materials
- Offers of resource persons to help teach in emerging technology areas
- Requests for inservice training programs to meet local industry needs
- Increased enrollments in adult upgrading programs
- Increased support of the educational institution in a variety of ways by local business, industry, labor, and management

While the public relations value of DACUM is secondary to its main purpose, its significant, long-term impact is too important to overlook or lightly dismiss. Linkages can be developed which, if properly nurtured can be long lasting and extremely beneficial.

Business needs to design new training programs quickly and effectively. The skills and
competencies needed must be job or process specific, if they are to meet the company’s production and quality goals. Business needs highly job-relevant training and they must reduce the start-up time and cost for the design and delivery of programs. As one company reported, they cannot afford to spend 30 or more days on an occupational analysis if a two-day DACUM workshop can do the same job better and much cheaper.

Who Uses DACUM?

DACUM is used by:

- **Educational agencies** such as state departments of education, community and technical colleges and institutes, proprietary school/colleges, colleges of education and universities, and secondary schools.

- **Business and Industry** to do all kinds of human resource development and quality management decision-making. Many businesses and industries (hereinafter referred to as businesses) are using DACUM for job and occupational analysis as a basis for training program development, job descriptions, career development, job restructuring, etc. Recently a number of companies have been very successfully using the method with some adaptation to analyze job processes and systems rather than for the more common identification of duties and tasks. Dinah Chesson of Ericsson reports that, “DACUM has proved to be the most efficient and effective means for gathering pertinent job-related information for use in the company’s technical training and professional development programs. The internal Ericsson Wireless Communications Malcolm Baldrige Business Assessment Team recently cited the organization’s use of DACUM, in training development, as a ‘Best Practice’.”

- **International Agencies** in over 25 countries have used the DACUM process for education and training program development and updating. User countries include: Philippines, Hungary, Jamaica, Canada, New Zealand, Venezuela, Turkey, Brazil, Malaysia, Singapore, and China.

How is DACUM Used?

DACUM has been and continues to be put to many uses. Some of the most common are presented here under three broad categories.

Management Uses:

- Re-design jobs
- Conduct performance evaluations
- Establish SOP’s (Standard Operating Procedures)
- Determine task value added
- Control competency development
- Input to quality planning ISO/QS9000

Training Related Uses:

- Identify training program competencies
- Determine task importance/difficulty
- Assess training needs
• Basis for developing training materials
• Identify performance standards

Recruitment/Placement Uses
• Develop job descriptions (ADA requirements)
• Conduct career planning and development
• Certify occupation competency

REFERENCE


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